IN THE CLAIMS:

Please replace claims 1-12 with the following rewritten versions:

1. (Amended) Electrolytic process for plasma microarc oxidation for obtaining a ceramic coating on a surface of a metal having semiconducting properties by a physico-chemical transformation reaction of the treated metal, comprising:

immersing the metal in an electrolytic bath composed of an aqueous solution of an alkali metal hydroxide and an oxyacid salt of an alkali metal, the metal forming an electrode; and

applying a signal voltage of overall triangular waveform to the electrode, having at least a rising slope and a falling slope, with a form factor that can vary during the process, generating a current which is controlled in intensity, waveform and ratio of positive intensity to negative intensity.

2. (Amended) Process according to Claim 1, wherein the rising and falling slopes of the voltage signal are approximately symmetric.

3. (Amended) Process according to Claim 1, wherein the rising and falling slopes of the voltage signal are asymmetric and have angles which vary during the electrolysis.

4. (Amended) Process according to Claim 1, further comprising making the value of the triangular voltage change between 300 and 600 Vrms during the process.

5. (Amended) Process according to Claim 1 further comprising making the frequency of the triangular signal vary between 100 and 400 Hz during the process.

6. (Amended) Process according to Claim 1 further comprising making the value of the current vary or fixing it independently of the value of the voltage.

7. (Amended) Process according to Claim 1, further comprising varying the form factor, a value of a potential, a frequency and a value of a current, independently during the process.

8. (Amended) Process according to of Claim 1, further comprising varying the form factor, a value of a potential, a frequency, a value of a current and the UA/IC ration, simultaneously during the process.

9. (Amended) Process according to Claim 1, further comprising separately controlling the waveforms and electrical power values VI in a positive phase and/or in a negative phase.

10. (Amended) Electronic generator for implementing the process according to Claim 1 comprising:

a first unit for connection to a single-phase or three-phase electrical supply from mains and a second unit for connection to an electrolysis tank:

a module for converting a sinusoidal AC signal delivered by the mains into a trapezoidal or sawtooth signal;

a module for modifying a slope and a form factor of the signal;

a module for varying a frequency in various types of cycle; and

a module for managing electrical energy according to parameterized energy and energy used.

11. (Amended) Electric generator according to Claim 10, wherein the generator includes, at an output, an isolating transformer with series-connected capacitors in primary or secondary, in order to filter a DC component so as to prevent the magnetic circuit from saturating, while introducing optimum operating safety in respect of electrical protection, with connection of one of the poles to the earth.

12. (Amended) Electric generator according to Claim 10, wherein the generator is controlled by a PC-type processor used to manage the various parameters during the execution of the process.

Please insert the following newly added claims:

13. (Newly Added) Process according to claim 1, wherein the metal is selected from the group comprising aluminum, titanium, magnesium, hafnium, zirconium and alloys of the same.

14. (Newly Added) Process according to claim 1, wherein the aqueous solution is potassium hydroxide or sodium hydroxide.